

**To:** Elisha Back (Kinder Morgan Energy Partners)  
**From:** Nick Ricono (TRC)  
**Date:** January 18, 2005  
**Subject:** **Evaluation of Biological Resources at the Line Section 111 Washout Location in the San Gorgonio Pass, Riverside County, California.**

## **PROJECT DESCRIPTION**

Kinder Morgan Energy Partners (KMEP) owns and operates a 20-inch pipeline, Line Section (LS) 111, which transports petroleum products between Colton, California and Phoenix, Arizona. LS 111 crosses the San Gorgonio River near the intersection of Interstate 10 and State Highway 111 in the vicinity of the city of Palm Springs (Figure 1 [Attachment A]). Heavy stormwater flows in 2004 undermined the soil cover over the pipeline leaving the line exposed. KMEP is proposing to re-cover the exposed line and install a system that will stop erosion during future storm events.

TRC Companies Inc. (TRC) was retained by KMEP to review the biological issues associated with repair and protection of the exposed pipeline and to provide input on potential permitting requirements. Evaluation of biological issues includes a habitat assessment of the location to determine if habitat is available for sensitive plant or wildlife species that are known to occur in the project area based on existing documentation. The evaluation also includes an assessment of the jurisdictional status of affected waterways to determine if they are subject to the authority of the United States Army Corps of Engineers (USACE) or the California Department of Fish and Game (CDFG).

KMEP is proposing to recover the pipeline and install a system that will provide protection during future storm events. Four options discussed by Peter DiSomma from SPEC Services, Inc. and Scott Clapp from Ercon, Inc. (pers. com. 2004) included:

- 1) A relocation drop section that would include open trenching approximately 250 feet of pipe and lowering it below a level that could be affected by future storm events.
- 2) Re-contouring the existing stream channel to the east to keep stormwater from bending around the eastern side of the hill by re-channeling the main river route to the east and placing a small berm or jetty to block off the side channel that flows south over the pipeline.
- 3) Placing permeable mesh weirs or jetties along the eastern edge of the hill, upstream of pipeline, to slow velocity of water before it reaches the pipeline. This would involve restoring cover over the pipeline and re-establishing the natural slope for the hillside.

- 4) Restoring cover over the pipeline in its existing location and placing rip-rap around the pipeline to divert flow.
- 5) Restoring cover over the pipeline and monitoring the cover on a regular basis.

All discharges of dredge or fill material into waters of the U.S. (WUS) that result in permanent or temporary losses of WUS are regulated by the USACE under Section 404 of the Clean Water Act. Section 1600 of the California State Fish and Game Code (CSFGC) requires authorization from the CDFG for any project that will substantially change the bed, channel, or bank of any water of the State of California (WSC), which includes rivers, streams, and lakes.

This report describes the survey methodology used to assess potential impacts to sensitive biological resources, the results of the survey, information on permits required to conduct the work, and recommendations for avoiding potential impacts.

## **METHODS**

### ***Preliminary Information***

Jurisdictional determinations were made with a combination of topographic maps, aerial photographs, review of Guidelines for Jurisdictional Determination for Waters of the United States in the Arid Southwest (USACE 2001), and observations made during a site visit.

TRC evaluated whether endangered, threatened, or otherwise sensitive species or natural communities could potentially be present within the project area. Sensitive resource analysis began with a search of the CDFG's California Natural Diversity Database (CNDDB) to search for known occurrences of sensitive species and natural communities in the project area. The project location lies within Township 3 South, Range 3 East, Section 8 of the White Water 7.5-minute U.S. Geological Survey (USGS) quadrangle. CNDDB's RareFind3 database was searched on December 13, 2004 for information on the White Water, Cabazon, Catclaw, Desert Hot Springs, Lake Flumors, Morongo Valley, Palm Springs, San Geronimo, and San Jacinto Peak 7.5-minute USGS quadrangles. The White Water quadrangle was then overlaid with geo-referenced RareFind3 data to show the proximity of known occurrences of sensitive species to the project area (Figure 2, Attachment A). A list of special-status plant and animal species that could potentially occur in the project area was developed using RareFind3 data (Attachment B). Information on special status plant species was obtained from the California Native Plant Society (CNPS [2004]). Existing documentation was reviewed including aerial photographs and USGS topographic maps to determine where habitat variations might occur in the project area.

The project area lies within the regulatory boundaries of the Coachella Valley Multi Species Habitat Conservation Plan (CVMSHCP). The CVMSHCP was obtained (Coachella Valley Association of Governments 2003) and referenced for general information on the Coachella Valley, information on potential sensitive species and natural communities, and mitigation strategies for potential impacts.

### ***Field Assessment***

A field survey was conducted by TRC biologist Nick Ricono on December 15, 2004. The field survey included a jurisdictional determination of waterways in the project area and a habitat assessment of the project area. The jurisdictional determination included an assessment of drainage patterns and sources of the San Gorgonio River. As part of the habitat assessment, a general vegetation community survey was conducted to identify habitat variations in the project area. The project area was assessed for potential to provide habitat for sensitive species or natural communities. Observations of wildlife were recorded based on direct observation, wildlife sign (tracks, burrows, nests, scat, etc.), or vocalization. Site photographs were taken and are included in Attachment C.

Waterway boundaries were delineated using a Garmin *eTrexLegend* personal navigator operated following manufacturer's recommendations for obtaining three-meter accuracy. Post-processing of the data was carried out using MapSource software and electronic Geographic Information Systems (GIS) shape files were created. GIS data was geo-referenced with topographic maps (Figure 3, Attachment A) and aerial photography (Figure 4, Attachment A) using AutoCADD 3.2 to produce figures with visible boundary lines of jurisdictional waters. Representative photographs are available in Attachment C.

## **RESULTS**

### ***Jurisdictional Determination***

LS 111 is a 20-inch pipeline that travels from Colton, California to Phoenix, Arizona predominantly within railroad right-of-way (ROW). The location of the pipeline washout occurs within the San Gorgonio River near the intersection of Interstate 10 and State Highway 111 (Figure 1, Attachment A). The San Gorgonio River is a seasonal waterway that collects runoff from the San Bernardino and San Jacinto mountain ranges and flows east before it merges with the Whitewater River and flows toward the Salton Sea. The stream has no water in some years and is dry most of each year making it a "dryland fluvial system" as defined by the USACE (2001). Dryland river systems are dominated by short, high magnitude storm events in areas with substantial coarse alluvium creating a braided channel morphology. Braided channels are generally characterized by abundant bedload, steep channel gradients, highly erodible banks and highly variable discharge (USACE 2001).

According to the USACE (2001) when conducting jurisdictional determinations in arid areas, one should be cognizant of the physical characteristics of dryland fluvial systems and insure that the horizontal extent of jurisdiction includes small to moderate storm events, but is not so expansive that it incorporates field evidence from the 25-year, 50-year or 100-year storm event. The horizontal extent of Section 404 jurisdiction will, therefore, usually include the active stream channel(s) and flood terraces immediately adjacent to these active braids.

Approximately 10 feet of the pipeline lies exposed along the eastern edge of a large hill that borders the river channel (Figure 3, Attachment A). During heavy stormwater flows a portion of the water in the San Gorgonio River bends around the eastern edge of the hill following an

offshoot of the main channel to the south. LS 111 travels from west to east through this offshoot channel. The erosive forces of the water have removed the cover from the pipeline leaving approximately 10 feet exposed at the base of the large hill. The stream channel flows to the south until eventually meeting up with the main channel at a point southeast of the project location.

The main body of the San Gorgonio River bypasses the area where the pipeline is exposed and flows directly east toward the junction of Interstate 10 and Highway 111. The main flood channel is approximately 72 feet wide with banks along the northern edge approximately four feet high. This entire stream channel is not jurisdictional to the USACE as it is most likely the 100-year flood channel. Several braided stream channels that are jurisdictional to the USACE exist within that area totaling a width of about 32 feet. These braided stream channels would also be under the jurisdiction of the CDFG under Section 1600 of the CSFGC. However, CDFG jurisdiction extends beyond the stream channels themselves to include riparian areas adjacent to the stream channel. Within this braided stream system in the project area, riparian habitat extends to the banks of the 100-year flood channel (Figure 3, Attachment A). No wetlands are present within this dryland fluvial system as defined by USACE Wetland Delineation Manual (1987).

The off shoot stream channel that crosses the pipeline ROW is 26 feet wide at the point of intersection with the exposed pipeline with a depth that varies between 4 and 8 inches along the eastern bank. No vegetation is present within the stream channel itself but vegetation common to dry washes is present along the banks of the channel. Based on these visible characteristics, the channel through which the pipeline travels would be considered a jurisdictional waterway by the USACE-Los Angeles District and would be subject to regulation under Section 404 of the Clean Water Act. CDFG jurisdiction would extend nine feet beyond the eastern stream bank to encompass riparian vegetation.

### ***Habitat Assessment***

The project site lies at the western edge of the Coachella Valley portion of the Colorado Desert geomorphic province (U.S. Department of Agriculture [USDA] 1997). The Coachella Valley is aligned toward the northwest, but curves around to the west along the Banning Fault; the Banning Fault being the southern branch of the San Andreas Fault, which splits in the Coachella Valley along two paths at the southern edge of the San Bernardino Mountains. Fluvial erosion and deposition and eolian deflation and deposition are the main geomorphic processes (USDA 1997).

It is these eolian deposits that provide the Coachella Valley with a distinctive biological community (CVMSHCP 2003). Strong winds funnel through the San Gorgonio Pass from the west through areas of sand deposition from the San Gorgonio and Whitewater rivers and create an eolian dune system. The mean annual precipitation averages 3 to 4 inches. Mean annual temperature is about 68 to 75 degrees Fahrenheit with long periods above 100 degrees during summer months.

A site visit was conducted on December 15, 2005 during clear weather conditions. The project area has been disturbed by activities such as utility line placement, development of a large wind farm along the western margin of the project area and the location of Interstate 10 to the north. The stream channel and surrounding hills are used extensively by off-road vehicles. Despite these disturbances, habitat is available for vegetation and wildlife in the project area. Habitat types that could potentially be affected by project activities were noted during the field visit. The pipeline, in the project area, passes through upland habitat types including eolian dune complexes with rock outcroppings and lowland habitat types including desert washes, desert riparian vegetation, and creosote scrub habitat.

### **Upland Habitat Types**

Upland habitat types in the project area include eolian sand dune complexes with rocky outcroppings. The project site lies at the western edge of the Coachella Valley and, therefore, does not receive the eolian sands that western Coachella Valley receives, but rather is the source of these sands. However, the eastern edge of the large hill through which the pipeline passes prior to entering the braided stream channel (at the location of the exposed pipeline) shows characteristics of an eolian sand dune. These characteristics include very fine windblown sands with little or no vegetation cover.

Granite rock outcroppings exist along the top of this dune and along its southern margin. Hills further to the south are dominated by these granite outcroppings. Vegetation along the hill top included members of the Creosote bush-white bursage series (Sawyer and Keeler-Wolf 1995) including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), coastal bladderpod (*Isomeris arborea*), sandpaper plant (*Petalonyx thurberi*), bladderpod sage (*Salazaria mexicana*), desert olive (*Forestiera pubescens*), and black banded rabbit brush (*Chrysonthamnus paniculatus*).

### **Lowland Habitat Types**

As the pipeline descends the dune complex, it enters a lowland area that is part of the fluvial system of the San Gorgonio River. At the eastern margin of the dune complex, the pipeline enters a desert wash that is approximately 26 feet wide. The wash is filled with fine fluvial sands and is unvegetated. Vegetation provides stabilization for the stream banks along the eastern and western margins. That vegetation was dominated by the Creosote bush-white bursage series with the introduction of the desert willow (*Chilopsis linearis* ssp. *arcuata*), a native plant common to desert washes, and small patches of the non-native giant reed (*Arundo donax*).

The Creosote bush-white bursage series dominates the lowland section of the project area between the channels of the braided river system and included creosote bush, white bursage, bladderpod sage, coastal bladderpod, winterfat (*Krascheninnikovia lonata*), arrow-weed (*Pluchea sericea*), broom baccharis (*Baccharis sarothroides*), and California ephedra (*Ephedra californica*).

### **Habitat For Sensitive Species**

There is potential for the existence of sensitive species in the project area due to the availability of habitat. The table in Attachment B provides a list of sensitive species that are known to inhabit areas surrounding the property based on CNDDDB results. Figure 2 (Attachment A) shows the location of sensitive species known to occur near the project area (CNDDDB 2004).

Site-specific habitat availability for sensitive species was determined during the field investigation on December 15, 2004. The following provides a brief description of sensitive species for which habitat is available within or immediately adjacent to the project area.

### **Reptiles**

The Coachella Valley fringe-toed lizard (*Uma inornata*) is a federally threatened and state endangered species that is restricted to sand dune habitat in the Coachella Valley. It is associated with a substrate of eolian sand to which it has developed morphological and behavioral adaptations, and it occurs wherever there are large patches of the appropriate substrate (CVMSHCP 2003).

No Coachella Valley fringe-toed lizards were observed during the field investigation, however habitat exists within the lowland portion of the project area (within the desert washes) and along the eastern portion of the sand dune through which the pipeline travels. The lizard has been recorded at six locations within three miles of the project site including one less than half a mile to the south.

Coast San Diego horned lizard (*Phrynosoma coronatum*), a proposed threatened federal species and a state species of concern, inhabits desert washes and flats and requires fine sand for burrowing. This species has not been recorded within three miles of the project location and the species was not observed during field investigations. However, habitat is available within the channels of the San Gorgonio River and other lowland sites within the project area.

Northern red-diamond rattlesnake (*Crotalus ruber ruber*), a state species of concern, inhabits deserts from coastal areas to the eastern slopes of the mountains. They occur in rock areas or areas of dense vegetation, which provide surface cover for the species. The species was not observed during field investigations. However, the species has been recorded approximately three miles south-southeast of the project location. Habitat is available for this species in the rocky outcroppings at the top of the sand dune along the pipeline ROW and within the dunes to the south.

### **Birds**

There is potential foraging habitat for sensitive raptor species in the project area including the prairie falcon (*Falco mexicanus*), a state species of concern. These raptors inhabit dry, open terrain and breed in rocky areas. The breeding season of raptors starts in February and continues through July.

Least Bell's vireo (*Vireo bellii pusillus*) is a state and federal endangered species that is a summer resident of Southern California in low riparian areas near water or in dry river bottoms. Their nests are placed along margins of bushes, usually willow, baccharis, or mesquite. One known location of least Bell's vireo exists just over two miles south of the project site. Potential nesting habitat exists for this species along the margins of the dry washes in the project area.

Le Conte's thrasher (*Toxostoma lecontei*) is a state species of concern that is primarily found in open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. They commonly nest in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground. One known location of Le Conte's thrasher exists just over three miles east of the project site.

### **Plants**

Although no sensitive plant species were observed during the December 15, 2004 site visit, habitat does exist in the project area for the Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), a federal endangered species and a CNPS List 1B plant. It has been recorded in five locations within three miles of the project site the closest being about one and a half miles to the southeast. The species occurs on sandy flats, in washes, on outwash fans, and sometimes in dunes (CNDDB 2004).

The project area lies within the proposed Whitewater River Critical Habitat Unit for the Coachella Valley milk-vetch (Federal Register 69-239 page 74468, December 14, 2004). The proposal for Critical Habitat is within the public review period and has not been approved as final.

## **CONCLUSIONS**

### ***Jurisdictional Determination***

The stream channel through which the exposed pipeline travels would be considered a WUS by the USACE and a WSC by the CDFG. No wetlands were present within or adjacent to the stream channel. The deposition of fill material into the WUS would require a Section 404 permit from the USACE and Section 401 Certification from the Regional Water Quality Control Board (RWQCB). That includes the placement of fill material on the exposed pipeline, addition of any rip-rap, and construction of any jetties or weirs that require deposition of fill material. Any alteration of this stream channel or adjacent riparian vegetation would also require a Streambed Alteration Agreement from the CDFG through Section 1600 of the CSFGC.

### ***Sensitive Species***

No sensitive plant or wildlife species were observed during the site visit on December 15, 2004. Habitat for sensitive species has been degraded due to its proximity to major highways, the construction of utility corridors, construction of a wind farm to the west, and off-road vehicle traffic. However, habitat for sensitive plant and animal species is present in upland and lowland habitats in the project area.

The eolian dune complex with rock outcroppings provides habitat for the Coachella Valley fringe-toed lizard (federally threatened and state endangered), the Coast San Diego horned lizard (state species of concern), and the northern red-diamond rattlesnake (state species of concern). The rocky outcroppings may provide breeding habitat for the prairie falcon (state species of concern). The dune complex may also provide habitat for the Coachella Valley milk-vetch (federally endangered and CNPS List 1B) although none was observed during the field investigation.

The desert washes and adjacent areas may provide habitat for Coachella Valley fringe-toed lizard, Coast San Diego horned lizard, and Coachella Valley milk-vetch. Adjacent riparian areas may provide nesting habitat for the least Bell's vireo (federal and state endangered) and Le Conte's thrasher (state species of concern).

### ***Impacts Associated with Proposed Activities***

Each of the proposed activities designed to cover and protect the pipeline will create an impact to waters under the jurisdiction of the USACE and CDFG, and could potentially impact habitat for threatened, endangered, and otherwise sensitive species which could potentially require consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act. The following are impacts that would potentially occur during proposed activities.

- 1) **A relocation drop section** – This option would include open trenching approximately 250 feet of pipe and lowering it below a level that could be affected by future storm events. This would require the excavation of five to ten thousand cubic yards of soil comprising eolian sand dune and desert wash habitat. It would require the temporary disturbance of eolian dune complex, rocky outcropping, desert wash and riparian habitat. It would require a 404 permit, 1600 agreement, and 401 Certification. Section 7 consultation could potentially be avoided by conducting pre-construction surveys for Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch and maintaining biological monitors on-site during activities. This option would most likely require restoration of disturbed vegetation or compensatory mitigation at an off-site location.
- 2) **Re-contouring existing stream channel to the east** – This option would alter the present stream course in order to keep stormwater from flowing through the offshoot channel to the south. This would require the removal of riparian vegetation within the 72 foot wide stream channel and construction of a small berm or jetty to block off the 26 foot wide stream channel that has caused the erosion around the pipeline. This option would permanently alter the flow regime in the 26 foot wide offshoot stream channel. This option would require a 404 permit, 1600 agreement, and 401 Certification. Because of the permanent impacts to habitat in the area, Section 7 consultation would most likely be required as would compensatory mitigation at an off-site location.
- 3) **Placement of permeable mesh weirs or jetties** – A series of permeable mesh structures would be placed upstream of the existing pipeline in order to slow the velocity of water



before it reaches the pipeline. This would involve restoring cover over the pipeline and re-establishing the natural slope for the hillside thus repairing the eolian dune complex to near original contour. It would require deposition of fill material into the waterway thus requiring a 404 permit (construction of mesh jetties would not require 404 permitting if support structures [poles] were driven into the streambed), 1600 agreement, and 401 Certification. Section 7 consultation could potentially be avoided by conducting pre-construction surveys for Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch and maintaining biological monitors on-site during activities. It is unlikely that compensatory mitigation would be required because of minimal habitat disturbance.

- 4) **Restoring cover over the pipeline and placing rip-rap around the pipeline to divert flow** – Would involve restoring cover over the pipeline and re-establishing the natural slope for the hillside thus repairing the eolian dune complex to near original contour. This would require deposition of fill material into the waterway thus requiring a 404 permit, 1600 agreement, and 401 Certification. Section 7 consultation could potentially be avoided by conducting pre-construction surveys for Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch and maintaining biological monitors on-site during activities. It is unlikely that compensatory mitigation would be required because of minimal habitat disturbance.
- 5) **Restoring cover over the pipeline and monitoring the cover on a regular basis** – Would involve restoring cover over the pipeline and re-establishing the natural slope for the hillside thus repairing the eolian dune complex to near original contour. This would require deposition of fill material into the waterway thus requiring a 404 permit, 1600 agreement, and 401 Certification. Section 7 consultation could potentially be avoided by conducting pre-construction surveys for Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch and maintaining biological monitors on-site during activities. It is unlikely that compensatory mitigation would be required because of minimal habitat disturbance.

To avoid disturbance of areas that may provide habitat for sensitive plant and wildlife species and potentially avoid the requirement for a Section 7 consultation, the following recommendations should be followed:

- Ground disturbance shall not occur without prior approval from the USACE, CDFG, and RWQCB.
- Best Management Practices shall be installed during construction activities to prevent disturbed soils from entering the wash.
- Activities within the wash shall be limited to the dry period of the year from May to November and when the wash is not actively flowing and no measurable rain is forecasted within 48 hours.
- Once the method of construction is identified, pre-construction surveys should be conducted to identify access, staging and laydown areas that create the least amount of impact. Access routes and laydown areas should be clearly identified using stakes and flagging. Pre-

construction surveys shall be conducted for Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch no more than two days prior to staging equipment.

- A qualified biological monitor shall be onsite during all ground disturbing activities to insure minimization of impact to habitat and insure no sensitive species enter the work area.
- Construction work shall be schedule outside of the nesting and breeding season of raptors (February through July) and other migratory birds including least Bell's vireo and Le Conte's thrasher (March through September).
- If construction operations are required during those months, a qualified biologist should conduct pre-construction surveys to identify active nests in the project area. Should active nests be found, a determination will be made in consultation with the CDFG and USFWS whether or not construction will impact the nests. If it is determined that construction will impact species, construction will be delayed until juvenile birds have fledged or until nesting season is completed.
- All construction personnel shall attend environmental awareness training prior to staging equipment.
- A post-construction survey will be conducted to calculate the disturbance to jurisdictional waters for reporting purposes.

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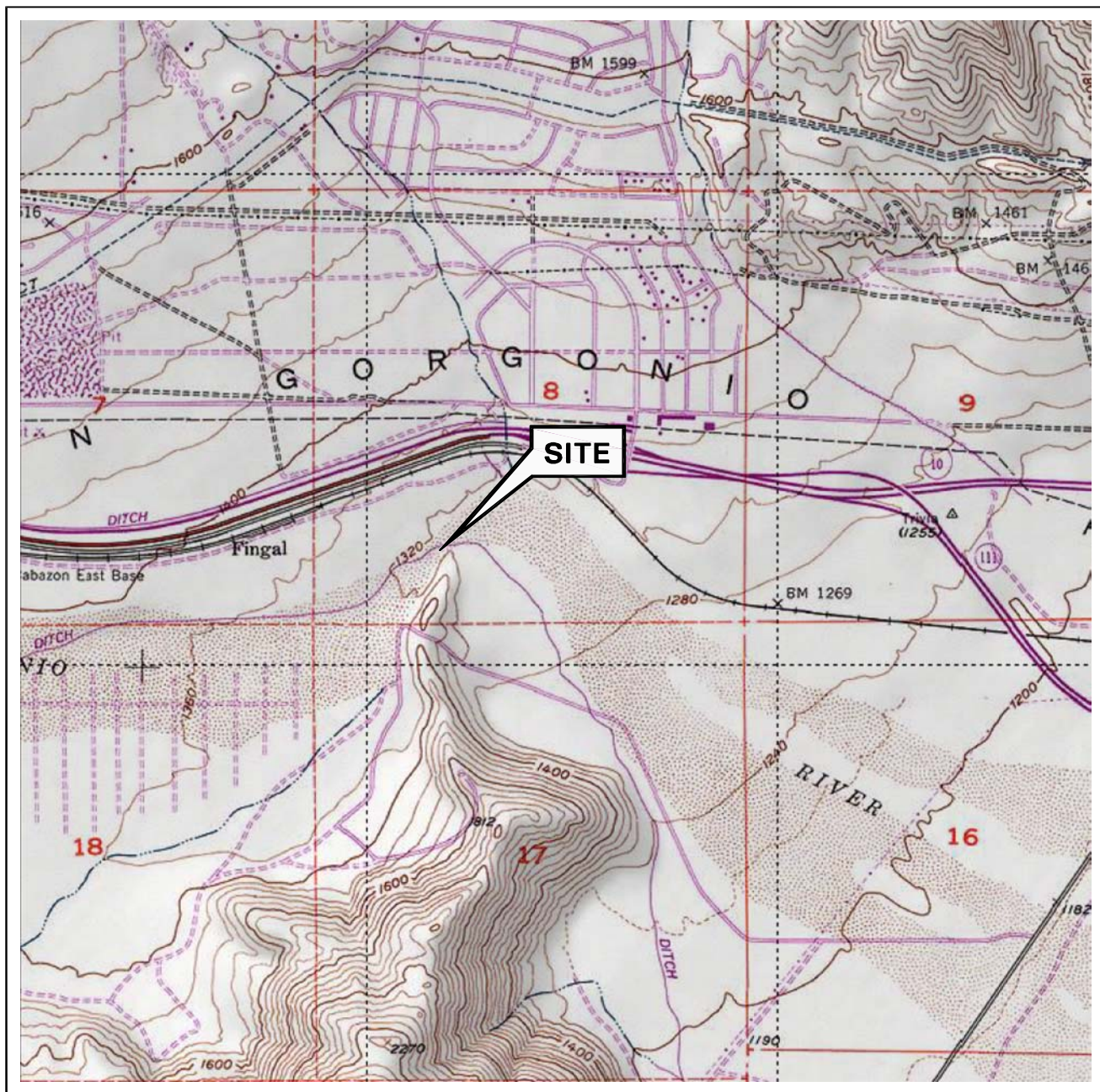
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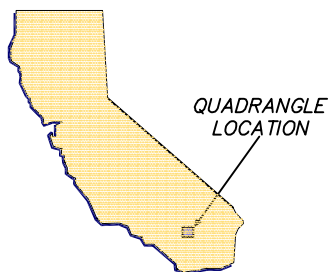
ATTACHMENT A

FIGURES



0 1/4 1/2 3/4 1 MILE

SCALE 1:24,000



#### VICINITY MAP

Kinder Morgan  
LS 111  
Riverside County, California

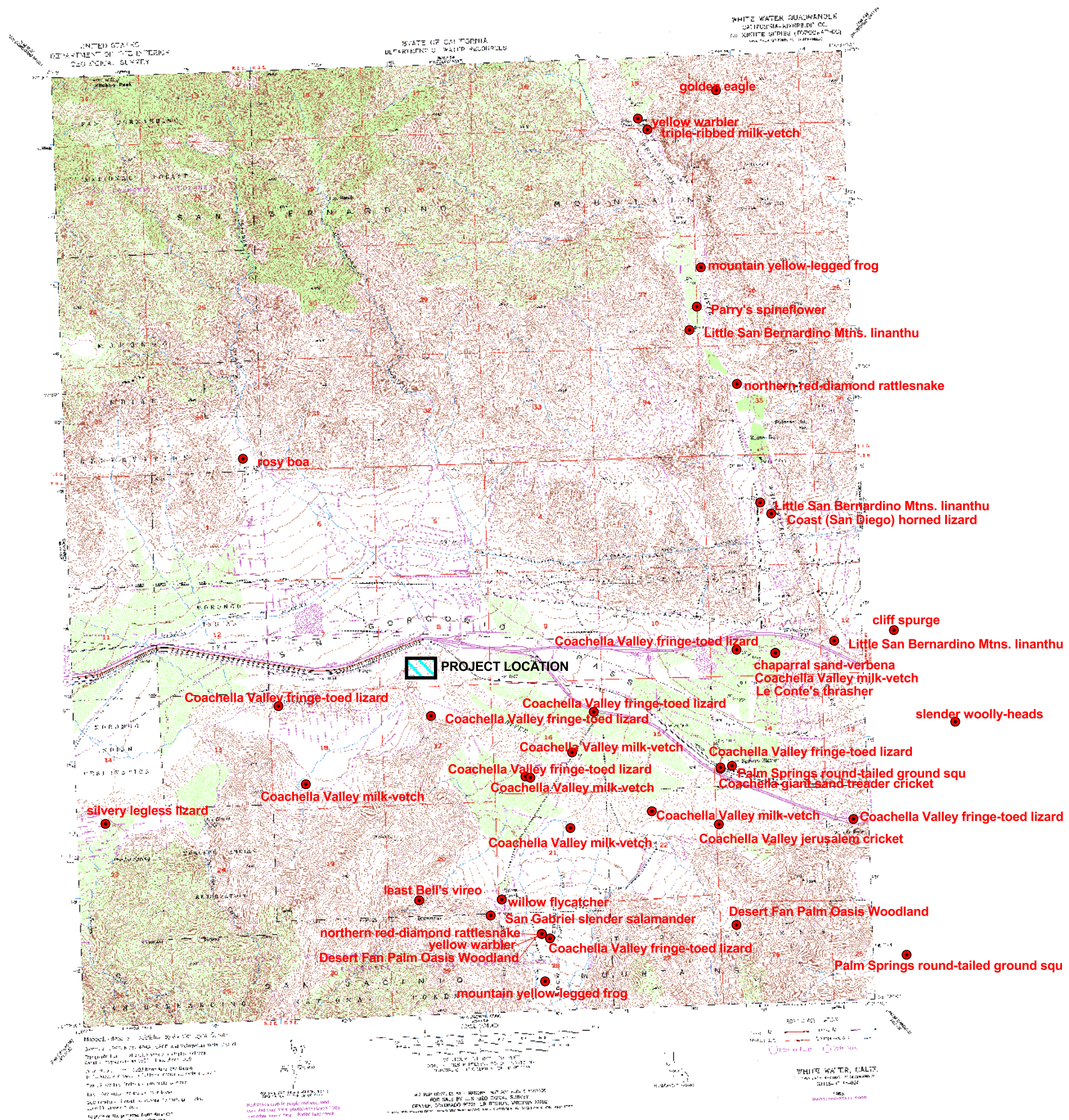
#### SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Cabazon Quadrangle

**TRC**

**FIGURE 1**





## RIVERSIDE COUNTY, CALIFORNIA

## FIGURE 2

White Water 7.5 min USGS Quadrangles.





0 1/4 1/2 MILE

SCALE 1:24,000

SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Whitewater Quadrangle



QUADRANGLE  
LOCATION

### STREAMBANK AND PIPELINE LOCATION

Kinder Morgan  
LS 111  
Riverside County, California

**FIGURE 3**

**TRC**



0 250 500 Feet

SOURCE:  
 United States Geological Survey  
 3.75 Minute DOQQ  
 Whitewater SW

**TRC**



## STREAMBANK AND PIPELINE LOCATION

Kinder Morgan LS 111  
 Riverside County, California

**FIGURE 4**



ATTACHMENT B  
SUMMARY OF SENSITIVE SPECIES

**Table 1. Summary of Sensitive Species (Information Accessed for White Water  
USGS 7.5 minute Quadrangle on December 14, 2004)**

Species	Habitat and Distribution	Status <sup>1</sup>	Probability of Occurrence <sup>2</sup>
<b>Amphibians</b>			
<b>San Gabriel slender salamander</b> <i>(Batrachoseps gabrieli)</i>	Found under rocks, wood, fern fronds, and on soil at the base of Talus slopes. Most active on the surface in winter and early spring.	Fed: None State: None	<b>Low:</b> No habitat available in project area.
<b>Mountain yellow-legged frog</b> <i>(Rana muscosa)</i>	Federal listing refers to the populations in the San Gabriel, San Jacinto and San Bernardino Mountains only. Always encountered within a few feet of water. Tadpoles may require up to two years to complete their aquatic development.	Fed: E State: None	<b>Absent:</b> No aquatic habitat available in project area.
<b>Mammals</b>			
<b>Palm Springs round-tailed ground squirrel</b> <i>(Spermophilus tereticaudus chlorus)</i>	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, & levees. Prefers open, flat, grassy areas in fine-textured, sandy soil. Density correlated with winter rainfall.	Fed: C State: SC	<b>Absent:</b> No habitat available in project area.
<b>Peninsular bighorn sheep</b> <i>(Ovis canadensis nelsoni)</i>	Open desert slopes below 4,000 ft elevation from San Gorgonio pass south into Mexico. Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes, with available water.	Fed: E State: T	<b>Absent:</b> No habitat available in project area.
<b>Reptiles</b>			
<b>Coachella Valley fringed-toed lizard</b> <i>(Uma inornata)</i>	Limited to sand dunes in the Coachella Valley, Riverside county. Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely spaced desert shrubs.	Fed: T State: E	<b>Moderate:</b> Potential habitat available in the project area.
<b>Coast San Diego horned lizard</b> <i>(Phrynosoma coronatum )</i>	Inhabits coastal sage scrub and chaparral in arid and semi-arid climates. Prefers friable, rocky, or shallow sandy soils.	Fed: None State: SC	<b>Moderate:</b> Potential habitat available in the project area.
<b>Northern red-diamond rattlesnake</b> <i>(Crotalus rubber rubber)</i>	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas & dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Fed: None State: SC	<b>Moderate:</b> Potential habitat available in the project area.

Species	Habitat and Distribution	Status <sup>1</sup>	Probability of Occurrence <sup>2</sup>
<b>Orange-throated whiptail</b> ( <i>Aspidoscelis hyperythra</i> )	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes & other sandy areas with patches of brush & rocks. Perennial plants necessary for its major food-termites	Fed: None State: SC	<b>Low:</b> No known occurrences within three miles of project location.
<b>Silvery legless lizard</b> ( <i>Anniella pulchra pulchra</i> )	Sandy or loose loamy soils under sparse vegetation. They prefer soils with high moisture content.	Fed: None State: SC	<b>Absent:</b> No moist soil available in project area.
<b>Birds</b>			
<b>Golden eagle</b> ( <i>Aquila chrysaetos</i> )	(Nesting & wintering) rolling foothills mountain areas, sage-juniper flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Fed: None State: SC	<b>Low:</b> Potential foraging habitat but no nesting habitat available in project area.
<b>Least Bell's vireo</b> ( <i>Vireo bellii pusillus</i> )	(Nesting) summer resident of southern CA in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite.	Fed: E State: E	<b>Moderate:</b> Potential habitat available in the project area.
<b>Le Conte's thrasher</b> ( <i>Toxostoma lecontei</i> )	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Fed: None State: SC	<b>Moderate:</b> Potential habitat available in the project area.
<b>Yellow warbler</b> ( <i>Dendroica petechia brewsteri</i> )	(Nesting) riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, & alders for nesting & foraging. Also nests in montane shrubbery in open conifer forests.	Fed: None State: SC	<b>Absent:</b> No habitat available in project area.
<b>Prairie falcon</b> ( <i>Falco mexicanus</i> )	(Nesting) inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Fed: None State: SC	<b>Moderate:</b> Potential habitat available in project area.
<b>Willow flycatcher</b> ( <i>Empidonax trailii</i> )	(Nesting) inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 elev. Require dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Fed: None State: E	<b>Absent:</b> No suitable riparian habitat available in project area.

Species	Habitat and Distribution	Status <sup>1</sup>	Probability of Occurrence <sup>2</sup>
<b>Plants</b>			
<b>Chaparral sand-verbena</b> ( <i>Abronia villosa</i> var. <i>aurita</i> )	Chaparral, coastal scrub sandy areas. 80-1600m.	Fed: None State: None CNPS: 1B	<b>Low:</b> Not observed in project area.
<b>Cliff spurge</b> ( <i>Euphorbia misera</i> )	Coastal bluff scrub, coastal scrub. In southern California, Baja, and on Guadalupe island. Rocky sites 10-500m.	Fed: None State: None CNPS: 2	<b>Absent:</b> No habitat available in project area.
<b>Coachella Valley milk-vetch</b> ( <i>Astragalus lentiginosus</i> var. <i>Coachella</i> )	Sonoran desert scrub. Endemic to the Coachella Valley, Riverside County. Sandy flats, washes, outwash fans, sometimes on dunes. 60-360m.	Fed: E State: None CNPS: 1B	<b>Moderate:</b> Potential habitat available in project area.
<b>Little San Bernardino Mountains linanthus</b> ( <i>Linanthus maculatus</i> )	Desert dunes, Sonoran desert scrub, Mojave desert scrub, Joshua tree woodland. Only known from Riverside and San Bernardino Counties. Sandy places, usually in light-colored quartz sand; often in wash or bajadas. 195-2075m.	Fed: None State: None CNPS: 1B	<b>Low:</b> Not observed in project area.
<b>Parry's spineflower</b> ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	Coastal scrub, chaparral. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chap and oak woodland; dry, sandy soils. 40-1705m.	Fed: None State: None CNPS: 3	<b>Low:</b> Not observed in project area.
<b>Slender woolly-heads</b> ( <i>Nemacaulis denudate</i> var. <i>gracilis</i> )	Coastal dunes, desert dunes, sonoran desert scrub. In California, known only from San Diego and Riverside counties. In dunes or sand. 0-560m.	Fed: None State: None CNPS: 2	<b>Low:</b> Not observed in project area.
<b>Triple-ribbed milk-vetch</b> ( <i>Astragalus tricarlinatus</i> )	Joshua tree woodland, Sonoran desert scrub. Known only from Riverside and San Bernardino counties. Hot, rocky slopes in canyons and along edge of boulder-strewn desert washes. 450-790m.	Fed: E State: None CNPS: 1B	<b>Low:</b> Not observed in project area.
<b>Insects</b>			
<b>Coachella giant sand treader cricket</b> ( <i>Macrobaenetes valgum</i> )	Known from the sand dune ridges in the vicinity of Coachella Valley. Population size regulated by amount of annual rainfall; some spots favor permanent habitation where springs dampen sand.	Fed: None State: None	<b>Low:</b> Habitat may be unsuitable in project area.
<b>Coachella Valley jerusalem cricket</b> ( <i>Stenopelmatus cahuilensis</i> )	Inhabits a small segment of the sand and dune areas of the Coachella Valley, in the vicinity of Palm Springs. Found in the large, undulating dunes piled up at the north base of Mt San Jacinto.	Fed: None State: None	<b>Low:</b> Habitat may be unsuitable in project area.

1. For a description of status designations see Legend on following page.

2. Based on the following categories: Absent; Not Expected To Occur; Low; Moderate; High; Present (Observed)

## Legend: Status Designations

### FEDERAL CLASSIFICATIONS

E	Federally listed as Endangered.
T	Federally listed as Threatened.
C	Candidate for federal listing.
SC	Federal Species of Concern.

### STATE CLASSIFICATIONS

E	State listed as Endangered.
T	State listed as Threatened.
C	State candidate for listing as Endangered, Threatened, or Rare.
SC	State Species of Concern.
R	State listed as Rare.

### CALIFORNIA NATIVE PLANT

#### SOCIETY (CNPS) CLASSIFICATION

1A	Presumed extinct in California.
1B	Rare, Threatened or Endangered in California and elsewhere.
2	Rare, Threatened or endangered in California but more common elsewhere.
3	Review List: Plants suggested for consideration as Endangered.
4	Watch List: Plants of limited distribution, whose status should be monitored.

ATTACHMENT C:  
SITE PHOTOGRAPHS

**Site Photographs**  
**Biological Resource Review – Line Section 111**



Photograph of exposed pipeline facing north from within the dry wash. Erosion evident along eastern edge of the dune complex. Rock outcropping evident on top of dune.



Photograph from pipeline right-of-way at top of dune facing northeast toward Interstate 10 and the main channel of the San Geronio River. Exposed pipeline lies at the base of the dune in this photograph.



**Site Photographs**  
**Biological Resource Review – Line Section 111**



Photograph from top of dune facing southeast toward side channel of San Gorgonio River. The exposed pipeline lies within this channel to the left of the picture frame.



Photograph from pipeline right-of-way at top of dune facing west toward the upstream channel of the San Gorgonio River. Wind farm visible along southern edge of river.